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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/349,198 07/07/99 PARKER

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BAKER & MCKENZIE  
805 THIRD AVENUE  
NEW YORK NY 10022

TM02/1002

EXAMINER

COLBERT, F

ART UNIT

PAPER NUMBER

2172

DATE MAILED:

10/02/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/349,198

Applicant(s)

PARKER, CHRISTOPHER F.

Examiner

Ella Colbert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 July 1999.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 & 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,721,915) Sockut et al, hereafter Sockut.

With respect to claim 1, a table recovery system (col. 1, lines 20-33 and col. 9, lines 19-22) and a tablespace access system coupled to the table recovery system, the tablespace access system is operable to restrict access to the tablespace to read-only access (col. 8, lines 57-67, col. 9, lines 1-18, and col. 9, lines 37-44). Sockut did not explicitly teach, a table recovery system, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a table recovery system and in view of Sockut's teachings of database performance and to modify in Sockut because such a modification would allow Sockut's system to have independent recovery of the data and indexes and a significant decrease in elapsed time since the log file updates are done for all objects in the database through the log file.

With respect to claim 2, the table recovery system further comprises a log record sorter system operable to sort log records from a log record file (col. 7, lines 25-36).

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With respect to claim 3, a data page updater system coupled to the log record sorter system operable to apply log record updates to a data page (col. 7, lines 37-62).

With respect to claim 4, a data page scanner system coupled to the data page updater system, the data page scanner system operable to locate records associated with a table in a data page (col. 11, lines 41-67 and col. 12, lines 1-11).

With respect to claim 5, Sockut did not explicitly teach, a page row extractor system coupled to the data page scanner system operable to extract page rows from a data page that has been located by the data page scanner system (col. 3, lines 10-17 and col. 9, lines 64-67).

With respect to claim 6, the table row inserter system coupled to the page row extractor system operable to write extracted page rows to the table (col. 6, lines 11-27). Sockut did not explicitly teach, a table row inserter but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a table row inserter and to modify in Sockut because such a modification would allow Sockut to have additional rows of data occupying or potentially occupying each cell formed by a row-column intersection. It is well known in the database art that a row is a series of items arranged horizontally within some type of framework.

With respect to claim 7, allowing at least one other table to have read-access to the tablespace (col. 5, lines 56-67, col. 6, lines 1-2, and col. 8, lines 52-64) and using a backup copy of the tablespace to restore the table (col. 9, lines 19-33). Sockut did not explicitly teach, allowing at least one table to have read-only access, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to allow at least one table to have read-

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only access and to modify in Sockut in view of his teachings of read-only access because such a modification would allow Sockut to have the capability of retrieving the tablespace but not being able to change it. It is well known in the art that a read-only document can be displayed or printed but not altered in any way; read-only memory (ROM) holds programs that cannot be changed.

With respect to claim 8, allowing at least one other table to have update access to the tablespace when the table is restored (col. 12, lines 18-25).

With respect to claim 9, deleting all rows of the table (col. 9, lines 64-67), locking out access to indexes of the table (col. 10, lines 34-39), applying log records to the tablespace backup copy to update the tablespace backup copy (col. 9, lines 19-32), building new table data pages with the updated tablespace backup copy (col. 14, lines 66-67 and col. 15, lines 1-12), and updating the table with the new table data pages (col. 14, lines 12-22). Sockut did not explicitly teach, locking out access to indexes in the table but it would have been obvious to one having ordinary skill in the art at the time the invention was made to lock out access to indexes in the table and to modify in Sockut because such a modification would eliminate the space needed for the index and the time needed for accessing the index.

With respect to claim 10, reading the log records from the log record file to a log record workspace (col. 4, lines 5-11), sorting the log records (col. 4, lines 11-17), and applying the log records to the tablespace backup copy (col. 4, lines 22-29 and col. 9, lines 19-22).

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With respect to claim 11, building new table data pages with the updated tablespace backup copy comprising scanning the new table data pages for records that belong to the table being recovered (col. 12, lines 1-11).

With respect to claim 12, receiving a backup copy of the tablespace (col. 9, lines 19-29), reading log records associated with the first table (col. 4, lines 5-11), applying the log records to the backup copy (col. 4, lines 22-29), building new table data pages from the backup copy (col. 14, lines 66-67), scanning the new table data pages for records of the first table (col. 11, lines 52-66), and updating the first table from the records (col. 14, lines 12-22). Sockut did not explicitly teach, a first table but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a first table and to modify in Sockut because such a modification would allow the data to be updated in the first table before it is copied to the new table and a backup copy is made of the data pages.

With respect to claim 13, Sockut did not explicitly teach, limiting access of the second table to the tablespace to read-only before the first table is updated and the second table depends on the tablespace, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to limit access of the second table to the tablespace to read-only before the first table is updated and the second table depends on the tablespace and to modify in Sockut because such a modification would allow Sockut to have the capability of retrieving the tablespace but not being able to change it prior to the first table being updated. It is well known

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in the art that a read-only document can be displayed or printed but not altered in any way; read-only memory (ROM) holds programs that cannot be changed.

With respect to claim 14, Sockut did not explicitly teach, providing update access to the second table after the first table is updated but it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide update access to the second table after the first table is updated and to modify in Sockut because such a modification would allow the second table to be updated in successive order since the first table is first to receive the update with the second table following which is in chronological order. Relational database management systems usually work with two data tables at the same time, relating the information or data through links established by a common column or field. A tablespace stores one or more tables containing file pages.

With respect to claim 15, sorting the log records (col. 12, lines 51-65).

With respect to claim 16, deleting the rows (col. 9, lines 64-67) and locking out the indices (col. 10, lines 34-39). Sockut did not explicitly teach, locking the indices, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to lock out the indices and to modify in Sockut because such a modification would eliminate the space needed for the indices and the time needed for accessing the indices.

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***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Crus et al (US 4,961,134) taught log records and tablespaces.

Courter et al (US 6,119,128) taught a log file, a tablespace, and a table index.

Isip, Jr. (US 6,189,010 B1) taught a database table and a tablespace in a DB2 database management system.

Barry et al (US 5,758,357) taught DB2 tablespaces and index files using a sort method.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is (703)308-7064. The examiner can normally be reached Monday through Thursday from 6:30 a.m. to 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu, can be reached on (703)305-4393.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**Or faxed to:**

(703)746-7238 or (703)746-7239, (for formal communications intended for entry).

**Or:**



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(703)746-7240 (for informal or draft communications, please label

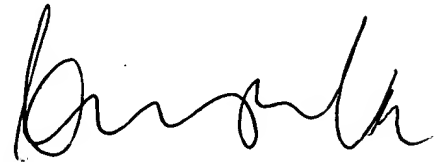
**"PROPOSED" or "DRAFT").**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, Virginia., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (703)308-9600.



E. Colbert  
September 29, 2001



KIM VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100